Exercise 15

Write an equation for a line perpendicular to $f(x) = 4x + 3$ and passing through the point $(8, 10)$.

Solution

The line perpendicular to $f(x)$ has a slope of $-1/4$. Use the point-slope formula to get the equation of this line.

$$y - 10 = -\frac{1}{4}(x - 8)$$

$$y - 10 = -\frac{1}{4}x + 2$$

$$y = -\frac{1}{4}x + 12$$